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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/811,735	03/29/2004	Edward Baroccla	38190/274032	1685

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EXAMINER	
DINH, TIEN QUANG	
ART UNIT	**PAPER NUMBER**
3644	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/811,735	BAROCELA, EDWARD	
	Examiner	Art Unit	
	Tien Dinh	3644	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 June 2007*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-19 and 21-28* is/are pending in the application.

4a) Of the above claim(s) *14 and 23-28* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13, 15-19, and 21-22* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

Claims 1-13, 15-19, and 21-22 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

The applicant has not adequately described what "initial stage of flight" means. Does the initial stage of flight mean when the missile is on the ground and ready for takeoff? Does the initial stage of flight mean 100 feet above ground after takeoff? Does it mean right before the engine is initiated? Please explain.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1, 2, 4-6, 9, 10, 16, 17, 19, 21, and 22, as best understood, are rejected under 35 U.S.C. 102(b) as being anticipated by MacConochie et al 5031857.

MacConochie et al discloses a transonic aircraft 26, 26 but clearly can be used as a "missile" (see Kamikaze in WW 2). The missile has a fuselage, wing actuator (column 4,l ines 47-50), engine 61, oblique wing 42, 44 (aspect ratio of less than 7, see figure 5) that that can be swept to less than 90 degrees or at an angle of 30 to 40 degrees (see column 4, lines 66-column 5, lines 1-5) and mounted to the fuselage member proximate to the midpoint of the wing (see figure 8). The aircraft can fly to Mach 0.9 for at least 30 minutes with lots of fuels in the aircraft. During the initial stage of flight (see figures 2-4) when the engine is not initiated, the wing member is aligned with fuselage and is in a stationary position.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1, 2, 4-6, 8-10, 16, 17, 19, and 21-22, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Groutage et al 4842218 in view of Smith 5992796.

Groutage et al teaches a missile that has a fuselage member, engine (that is capable of thrusting to transonic speed, see column 3, lines 24-25. Please note that cruise missiles are capable of supersonic flight), wing actuator that pivotally adjust the wing 40 (attached to the upper part of the fuselage, see figures) that is aligned with the fuselage and swings out to a deployed position. The midpoint 42 of the wing is where the wing is attached to the fuselage.

Groutage et al is silent on the wings being oblique/less than 90 degrees at transonic flight. However, Smith teaches that oblique wings 20 that are controlled via actuator 22 to have the wings at an angle of less than 90 degrees are well known and has certain aerodynamic advantages when flying at certain speed are well known in the art.

It would have been obvious to one skilled in the art at the time the invention was made to have used oblique wings that are controlled by the actuators that allow the wings to be rotated at a certain angle during flight in place of Groutage et al's system as taught by Smith to allow the aircraft to have increased maneuverability and fuel efficiency since the oblique wings are rotated relative to the fuselage.

Although, it is not disclosed, the wings of Groutage et al appear to have an aspect ratio of less than 7.0. Plus, wings having aspect ratio of less than 7.0 are well known in this day and age that one skilled in the art can use to make the missile operate more efficiently at certain speed and for certain sized/shaped missile. Applicant has not challenged this in any response.

Re claims 5 and 16, the wing sweeps at angle of 30 to 40 degrees during the deployment if desired. One skilled in the art would have made the wings swept at an angle of 30 to 40 degrees at certain speed to allow maximum maneuverability and increase efficiency such as reducing fuel, drag, etc. This arrangement yields said predictable results.

Re claim 8, it is obvious to one skilled in the art to have the fuselage member any size since this merely involves routine steps one skilled in the art would have taken to accomplish certain missions that do not require bigger missiles. This arrangement yields said predictable results.

Please note that a speed of Mach .9 is a design step one skilled in the art would have taken in Chen's system to allow the missile to hit the target quickly and efficiently.

The transonic flight for at least 30 minutes is a design step one skilled in the art would have taken to allow the missile to hit the target quickly and efficiently.

Re claim 16, Groutage et al's missile can be configured to be releasably attached to an aircraft.

Claims 3 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Groutage et al 4842218 as modified by Smith 5992796, as applied to claims 1 and 16 above, and further in view of Chen 6669137.

Groutage et al as modified by Smith disclosed all claimed parts except for wings being mounted on the lower surface of the fuselage. However, Chen '137 teaches that wing members 22 on the lower surface of the fuselage are well known. It would have been obvious to one skilled in the art to have used wing members on the lower surface of the fuselage in Groutage et al's system as taught by Chen so as to have the predictable result of increased maneuverability.

Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Groutage et al 4842218 as modified by Smith 5992796, as applied to claim 1 above, and further in view of Abell 4132374.

Groutage et al as modified by Smith disclosed all claimed parts except for the one-quarter chord attachments. However, Abell teaches such attachment length. It would have been obvious to one skilled in the art to have attached Groutage et al's wings at one-quarter chord as taught by

Abell so that the missile can have certain flight characteristic due to the quarter mounting to make the aircraft more maneuverable and more stable. The applicant has not included the criticality of such claimed subject.

Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Groutage et al 4842218 as modified by Smith 5992796, as applied to claim 1 above, and further in view of admitted prior art on page 7 or Harris et al.

Groutage et al 4842218 as modified by Smith 5992796 discloses all claimed parts except for the use of snubbers. However, the admitted prior art or Harris et al teaches that snubbers are well known to be used to reduce vibrations.

It would have been obvious to one skilled in the art at the time the invention was made to have used snubbers in Groutage et al's system as taught by admitted prior art on page 7 or Harris et al to reduce vibration.

Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Groutage et al 4842218 as modified by Smith 5992796, as applied to claim 1 above, and further in Fink et al 2423090.

Groutage et al 4842218 as modified by Smith 5992796 discloses all claimed parts except for the antenna that is within the wing and is substantially along the entire length of the wing. However, Fink et al teaches that an antenna that spans substantially the length of the wing.

It would have been obvious to one skilled in the art at the time the invention was made to have used an antenna that is attached to substantially the entire length of the wing in Groutage et al's system as taught by Fink to receive and transmit data if need be.

Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Groutage et al 4842218 as modified by Smith 5992796, as applied to claim 1 above, and further in view of Cohn 2732656.

Groutage et al 4842218 as modified by Smith 5992796 discloses all claimed parts except for the wound, spring-loaded actuator. However, Cohn teaches that wound, spring-loaded actuators are well known to pivot an object.

It would have been obvious to one skilled in the art at the time the invention was made to have used wound, spring-loaded actuators in Groutage et al's system as modified by Smith and as taught by Cohn as a substitution of parts to allow a more resilient actuator to pivot the wing.

Claim 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Groutage et al 4842218 as modified by Smith 5992796, as applied to claim 1 above, and in further view of Schroppel.

Groutage et al 4842218 as modified by Smith 5992796 discloses all claimed parts except for fins being pivotable. However, Schroppel teaches fins that pivot at the end of the fuselage are well known.

It would have been obvious to one skilled in the art at the time the invention was made to have Groutage's fins pivot as taught by Schroppel to make the missile more maneuverable.

Response to Arguments

The examiner appreciates the response from the applicant. However, in light of KSR v. Telefex and further examination, the examiner maintains that the claims are rejected with Groutage et al in view of Smith and the other cited references above. Groutage et al teaches a simple deployment mechanism to move the wing 40 from an aligned position to a perpendicular position relative to the fuselage. Since Smith teaches that an oblique wing can be deployed from zero degrees to 90 degrees to allow the missile/aircraft for increased maneuverability and increased efficiency, one skilled in the art would have used a known technique (taught by Smith) to Groutage et al to yield the predictable result of increased maneuverability and increased efficiency at different speed. Please note that the known technique taught by Smith allows the wings to be deployed quickly to a position that is not aligned with the fuselage so that the missile can be maneuvered quickly after launch. Please see KSR International Co. v. Teleflex Inc. 550 U.S.___, 82 USPQ2d 1385 (2007).

The new rejection (using Groutage et al) to reject applicant's amended claims renders applicant's arguments are moot.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tien Dinh whose telephone number is 571-272-6899. The examiner can normally be reached on 9-6.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Teri Luu can be reached on 571-272-7045. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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